

patients subjected to PMs implantation, initial or replacement, in our center compared with others studies. In the case of ICD implantations, initials or replacements, there weren't any adverse event. The additional hospitalization days and cost attributed to these adverse events depends on the nature of adverse event.

PMD2**RELATIONSHIP BETWEEN ECHOCARDIOGRAPHIC MARKERS AND INDUCIBILITY OF VENTRICULAR ARRHYTHMIAS IN ISCHAEMIC CARDIOMYOPATHY PATIENTS**
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OBJECTIVES: Research on prognostic factors of ventricular arrhythmias inducibility in patients with severe reduced LV systolic function being ICD candidates for primary prevention of sudden cardiac death has given limited results so far. Aim of our study was to examine the relationship of specific echocardiographic markers, beyond LV ejection fraction, particularly left ventricular hypertrophy and left ventricular end-diastolic diameter, with ventricular arrhythmias inducibility during electrophysiological study in patients with ischemic cardiomyopathy. **METHODS:** Data were acquired from patients with ischemic cardiomyopathy and severe reduced LV systolic function who underwent electrophysiological in the context of primary prevention of sudden cardiac death. Electrophysiological study protocol included programmed electrical stimulation from right ventricular apex. **RESULTS:** Of 119 patients included, ventricular arrhythmias were induced in 76 (63.9%). Prior echocardiographic study revealed 26 (21%) patients with ventricular hypertrophy (defined as interventricular septum and posterior wall diastolic thickness >11mm) and 90 patients (76.3%) with dilated left ventricle (defined as LV end-diastolic diameter >55 mm). 80% of patients with left ventricular hypertrophy had ventricular arrhythmias induced compared to 59% of patients without ventricular hypertrophy ($p < 0.05$). However, as regards LV end-diastolic diameter, difference between groups was not statistically significant ($p = 0.92$). **CONCLUSIONS:** In populations at high risk for sudden cardiac death, such as ischemic cardiomyopathy patients, ventricular hypertrophy is correlated to ventricular arrhythmias inducibility and possibly is a risk factor for spontaneous malignant arrhythmias.

PMD3**COMPARISON OF QUANTIFERON TB-GOLD (QFT-GIT) TEST VERSUS TUBERCULIN SKIN TEST (TST) FOR LATENT TUBERCULOSIS INFECTION (LTBI) SCREENING AMONG NATIONAL GUARD GENERAL POPULATION IN SAUDI ARABIA**
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OBJECTIVES: To compare QFT-GIT to TST in detection of latent TB infection among National Guard general population in Saudi Arabia. **METHODS:** a total of 1369 subjects chosen randomly from the catchment areas of PHC centers of national Guard Health Affairs in Saudi Arabia. Inclusion criteria were Saudi national, age 5 years or more, resident of Saudi Arabia and availability during the study. Exclusion criteria included age less than 5 years (to avoid the BCG vaccination effect on the results), present or previous active tuberculosis, those already diagnosed of having LTBI &/ or on anti TB prophylaxis & all immunocompromised conditions. Blood was drawn and processed using QFT-GIT followed by immediate administration of TST solution on subjects forearm. Data were collected and analyzed using SPSS software. Results were compared using the chi-square test & kappa coefficient was calculated. **RESULTS:** both tests had a significant overall agreement of 88.8% ($k = 0.332$; $p < 0.001$). Negative concordance represented 85.2% and positive concordance represented 3.6%. Positive QFT-GIT but negative TST was 5.5% of the results while positive TST but negative QFT-GIT was 5.7% of the results. Concordance was associated significantly with younger ages and female gender. Positive results in both tests were significantly associated with older ages and male gender only in 15-44 years age group. **CONCLUSIONS:** The overall agreement of TST & QFT-GIT among Saudi National Guard general population was 88.8% for detection of LTBI. In absence of a gold standard, QFT-GIT showed acceptable results compared to TST for detecting LTBI in intermediate TB burden country with at birth BCG highly vaccinated population.

PMD4**UTERINE FIBROID TREATMENT PATTERNS IN THE THREE YEARS FOLLOWING DIAGNOSIS**

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OBJECTIVES: To describe treatment patterns and diagnostic pathways for women with uterine fibroids up to three years following a new diagnosis. **METHODS:** Patients with a new diagnosis of uterine fibroids (ICD-9 code: 218.9) were identified in the Truven Health MarketScan Research Databases from 2004-2013. The use of specific diagnostic and treatment procedures and medications were described in the 12 months prior to (pre-index) and in the 12, 24 and 36 months following (post-index) the diagnosis (index event). Patients were required to have continuous enrollment throughout the pre- and post-index periods. **RESULTS:** A total of 359,672 patients met the selection criteria with mean age 46.1 years ($SD = 9.3$) at first diagnosis. Of those, subsets of 244,827 (68.1%) patients and 164,645 (45.8%) patients had 24 and 36 months of post-index follow-up, respectively. Hysterectomy was the most common surgical intervention, increasing from 29.3% in the first 12 months to 35.5% in the first 36 months; average time to hysterectomy was 49.7 days. Other surgical interventions used within the first 12 months of follow-up included: endometrial ablation (5%), curettage (3.6%), and either hysteroscopic myomectomy, laparoscopic myomectomy, abdominal myomectomy, or uterine embolization (<2% each). 13.1% of women used hormonal birth control with higher rates among younger women. IUDs or GnRH agonists were used by approximately 1% of women. Transvaginal

ultrasound was the most common imaging procedure both 12 months pre- and 36 months post-index (31.0%, 54.6%, respectively), followed by abdominal/pelvic ultrasound (27.3%, 49.6%, respectively). **CONCLUSIONS:** Approximately one-third of women with newly diagnosed uterine fibroids underwent hysterectomy within the first year of initial diagnosis. Minimally invasive procedures such as hysteroscopic myomectomy were infrequently utilized, despite published evidence showing considerably lower costs and complication rates over hysterectomy.

PMD5**COMPARATIVE EFFECTIVENESS OF FIBRIN SEALANTS IN CARDIAC SURGERY**

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OBJECTIVES: While effectiveness of fibrin sealants for controlling bleeding in cardiac surgery has been demonstrated, there is a paucity of research on other clinical outcomes of fibrin sealants. In this retrospective observational study we analyzed the clinical outcomes of two different fibrin sealants in a population of patients undergoing cardiac surgical procedures. **METHODS:** Data from patients undergoing coronary artery bypass grafting (CABG), valve and valvular procedures with CABG during the years 2008 - 2012 were extracted from Premier's Hospital Database. The Premier Hospital Database is a comprehensive database containing data from over 6 million US hospital discharges annually. Only surgeries in which a fibrin sealant was utilized were included; all other hemostatic agents were excluded from the study. The following clinical outcomes were assessed: major and minor complications, transfusions, surgical revisions for bleeding, operative mortality (hospitalization), OR time and hospital and ICU length of stay (LOS). Logistic regression analyses were performed on categorical outcome variables and GLM regression analyses were performed on continuous outcome variables. Study covariates included: age, primary procedure, Charlson Co-morbidity Index (CCI) score, heparin use, protamine use, admission type, gender, race, teaching hospital, bed size and region. **RESULTS:** A total of 2,560 inpatient cardiac procedures using fibrin sealant with synthetic aprotinin (FS-apr) were compared to 1,019 procedures using fibrin sealant without aprotinin (FS). Results suggested that FS-apr was associated with significantly lower rates of minor complications (21.1% vs. 27.1%, $p = 0.002$), Day 1 Transfusions (28.6% vs. 36.8%, $p = 0.015$) and ICU LOS (4.7 days vs. 7.1 days, $p < 0.0001$) as compared to FS. No significant differences were found between FS-apr and FS on the other clinical outcomes. **CONCLUSIONS:** FS-apr was associated with significantly lower rates of Day 1 Transfusions, avoidable minor complications and lower average ICU LOS as compared to FS.

PMD6**ALLOGENEIC PERIPHERAL BLOOD VERSUS BONE MARROW HEMATOPOIETIC CELL TRANSPLANTATION FROM UNRELATED DONORS: A META-ANALYSIS**

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OBJECTIVES: Peripheral Blood Transplant (PBT) accounted for three-quarters of the Hematopoietic Cell Transplant (HCT) from unrelated donors in the past decade, which indicates it has largely replaced Bone Marrow Transplant (BMT) as the preferred graft source. This shift occurred due to evidence suggesting faster neutrophil and platelet engraftment with the former. However, clinical evidence favoring PBT for other outcomes is inconclusive. Although meta-analyses have compared outcomes for PBT and BMT from related donors, no such analysis has been conducted for unrelated donor procedures. Our objective is to conduct a meta-analysis comparing the outcomes in patients undergoing allogeneic unrelated donor HCT comparing PBTvs.BMT. **METHODS:** We conducted a systematic literature search (PUBMED, CANCELIT and Cochrane databases) identifying randomized trials and retrospective studies comparing outcomes of allogeneic unrelated donor PBTvs.BMT. We extracted longitudinal transplant outcomes, including acute graft-versus-host disease (GVHD) grade II to IV (aGVHD), chronic GVHD (cGVHD), overall-survival (OS), transplant-related mortality (TRM), disease-free survival (DFS) and relapse from published Kaplan-Meier curves. We used the inverse variance method (Cochrane RevMan5.3.5) to estimate pooled hazard ratios (HRs) and 95% confidence-intervals (CI). HR value <1.00 for an outcome signified PBT as the favorable option compared to BMT. **RESULTS:** One randomized trial and five retrospective studies were included in the analysis. PBT was significantly less favorable than BMT on aGVHD [HR(1.30), CI(1.15 to 1.47)] and cGVHD [HR(1.32), CI(1.16 to 1.49)]. We did not find statistically significant differences in other outcomes: OS [HR(1.02), CI(0.86 to 1.21)], DFS [HR(1.00), CI(0.91 to 1.10)], Relapse [HR(1.02), CI(0.78 to 1.34)] and TRM [HR(0.98), CI(0.77 to 1.24)]. **CONCLUSIONS:** Although PBT is the predominant mode of allogeneic HCT, our meta-analysis found no outcomes for which PBT is favorable compared to BMT. The only statistically significant comparisons indicated increased hazard of acute and chronic GVHD with PBT. While PBT may offer other clinical advantages over BMT that merit weight in clinical decision-making, its failure to demonstrate significant improvements in overall survival, disease-free survival and transplant-related mortality and increased risk of GVHD calls current clinical practice into question.

PMD7**TIME-DEPENDENCE OF FIRST APPROPRIATE THERAPY IN PRIMARY PREVENTION IMPLANTABLE CARDIOVERTER DEFIBRILLATOR PATIENTS: IS DEVICE REPLACEMENT NECESSARY IN PATIENTS WITHOUT PRIOR ICD INTERVENTIONS?**

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OBJECTIVES: Implantable cardioverter defibrillator (ICD) is considered a lifelong therapy for the prevention of sudden cardiac death. However, it is still unresolved if patients who never experienced an appropriate ICD intervention during first generator longevity really need to undergo device replacement. **METHODS:** In a single-center prospective observational cohort study we examined the time-dependence of first appropriate ICD therapy for ventricular arrhythmias in patients who underwent ICD implantation for primary prevention. Primary prevention ICD patients were enrolled at the time of their first implantation and were evaluated thereafter for the first occurrence of appropriate ICD therapy for ventricular arrhythmias. **RESULTS:** Of 623 ICD recipients, 126 (20.2%) had appropriate ICD therapy. Incidence of first appropriate ICD therapy was 8.2% in the first year post-implant, increased to 13.7% in year 2, while in year 5 it was 28.3% (fig 1). Notably 39 patients received their first appropriate therapy after device replacement. No predictive factors for lower need of ICD therapy could be identified in patients without prior appropriate ICD intervention. **CONCLUSIONS:** In a primary prevention population the risk of first appropriate ICD therapy persists over long lifetime and necessitates continuing device therapy irrespective of shock-free intervals.

PMD8

CAN SEROLOGIC MARKERS OF FIBROSIS PREDICT FUTURE SHOCKS IN ICD RECIPIENTS WITH DILATED CARDIOMYOPATHY?

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OBJECTIVES: We investigated prospectively whether serum markers of collagen turnover could be used as predictors for the occurrence of malignant ventricular arrhythmias in patients with non-ischemic dilated cardiomyopathy (NIDC) implanted with an implantable cardioverter defibrillator (ICD) for primary prevention. Extracellular matrix (ECM) alterations in NIDC may provide electrical heterogeneity, thus potentially contributing to the occurrence of ventricular arrhythmia and subsequent SCD. **METHODS:** Serum C-terminal propeptide of collagen type-I (C1CP), C-terminal telopeptide of collagen type-I (C1TP), matrix metalloproteinase (MMP)-1, and tissue inhibitor of matrix metalloproteinases (TIMP)-1 were measured as markers of collagen synthesis and degradation in 70 patients with mildly to moderate symptomatic heart failure due to NIDC with LVEF <35%, who received an ICD for primary prevention of SCD. Patients were evaluated for any appropriate ICD delivered therapy, whether shock or antitachycardia pacing, during a 1-year follow-up period. **RESULTS:** Appropriate device therapies were delivered in 14 of the 70 patients during the follow-up period, with antitachycardia pacing in 2, antitachycardia pacing with shocks in 4, and shocks in 8. Preimplantation MMP-1 levels were significantly higher in patients who had appropriate ICD-delivered therapy than in those who did not have any therapy (27.7±1.6 ng/ml vs. 24.1±2.5 ng/ml, respectively, p<0.001). The same was true for baseline serum concentrations of TIMP-1 and C1TP (89±14 ng/ml vs. 58±18 ng/ml, p=0.008 and 0.46±0.19 ng/ml vs. 0.19±0.07 ng/ml, p<0.001, respectively). **CONCLUSIONS:** Undoubtedly, ECM alterations play a crucial role in the constitution of an arrhythmogenic substrate in NIDC and, given the availability of therapies to prevent fatal ventricular tachyarrhythmias, the quest for factors that have a very good correlation with appropriate ICD discharges in these patients is logical. Our results confirm the role of serum markers of collagen turnover as predictors of arrhythmic events in ICD recipients and could provide an auxiliary tool in this context.

PMD9

LONG TERM FOLLOW UP OF PRIMARY AND SECONDARY PREVENTION IMPLANTABLE CARDIOVERTER DEFIBRILLATOR PATIENTS: "REAL-WORLD" DATA FROM THE ISLAND OF CRETE

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OBJECTIVES: The beneficial effects of implantable cardioverter defibrillators (ICDs) in primary and secondary prevention patients are well established. However, relative scarcity of data exists regarding long-term follow-up outcomes of this population in the context of tertiary hospitals-ICD implantation centres beyond randomized clinical trials borders. The aim of the study was to exhibit "real-world" data and possible differences on mortality and ICD therapies between secondary and primary prevention ICD recipients. **METHODS:** All patients treated with an ICD, regardless of the underlying cardiac pathology, at the island of Crete were included in the current analysis. The study population was grouped by the type of prevention (secondary or primary) for sudden cardiac death. The primary endpoint was all-cause mortality. The secondary endpoint was the occurrence of device therapy (appropriate or inappropriate). **RESULTS:** A total of 854 (88.6% men) ICD recipients were included. Of these, 623 (73%) patients received an ICD for primary prevention of sudden cardiac death and 231 (27%) patients for secondary prevention. During a mean follow-up of 12.4 ± 7.8 years, 177 (20.7%) patients died. The incidence of mortality was 35.5% for secondary prevention patients and 15.2% for primary prevention patients (p<0.001). Ventricular arrhythmia triggered appropriate therapy in 91 (39.4%) secondary prevention patients. Accordingly the number of primary prevention patients that received appropriate therapy was 126 (20.2%). A comparable risk for inappropriate shocks was observed. **CONCLUSIONS:** During long-term follow-up, primary prevention patients exhibited a lower risk for all-cause mortality. Both groups showed similar occurrence of inappropriate

shocks but secondary prevention patients showed a higher rate of appropriate therapy.

PMD10

PHARMACOEPIDEMOLOGY OF CELLULAR/TISSUE DERIVED PRODUCTS FOR THE TREATMENT OF DIABETIC FOOT ULCERS IN OUTPATIENT CARE SETTINGS

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OBJECTIVES: Identify patient and clinical characteristics in the diabetic foot ulcer (DFU) population and examine patterns of cellular/tissue derived product (CTP) utilization. **METHODS:** Retrospective, de-identified electronic medical records from 2007-2013 were extracted from the Intellicure Limited Data Set (I-LDS). The I-LDS extracts records from 96 hospital-based outpatient wound centers. Patient, wound and encounter level characteristics were examined. CTPs of interest included extracellular matrix (ECM), human skin equivalent (HSE), and living skin equivalent (LSE). **RESULTS:** A total of 10,359 patients, 21,677 wounds, and 222,861 encounters for DFU were identified. The majority of patients was male (60.9%), Caucasian (63.5%), and reported Medicare as their primary insurance (51.1%). The average age was 63.9 (SD=13.5) and the average number of physician visits was 17.4 (SD=20.8). The mean wound surface area was 5.6 cm² (SD=27.3). The overall average wound age was 7.0 months (SD=16.26). Of the 21,677 wounds, approximately 8.6% received ECM (2.6%), HSE (2.6%), or LSE (3.4%). The average number of applications for ECM was 2.7 (SD=2.5), 2.0 (SD=1.7) for HSE, and 4.0 (SD=2.9) for LSE. Wounds treated with CTPs were, on average, several months older relative to the overall DFU population: 16.0, 16.4, and 14.7 months for ECM, HSE, and LSE, respectively. Overall average wound treatment time was 3.4 months (SD=8.4). However, treatment time was substantially longer with CTP utilization with an average time of 9.1, 9.3, and 8.0 months for ECM, HSE, and LSE, respectively. **CONCLUSIONS:** CTP utilization was relatively low within outpatient wound centers. Results from this analysis indicate that health care providers are using CTPs on older, more difficult-to-heal DFUs.

PMD11

EPIDEMIOLOGY OF ADVANCED THERAPIES FOR THE TREATMENT OF DIABETIC FOOT ULCERS IN OUTPATIENT CARE SETTINGS

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OBJECTIVES: Identify patient and clinical characteristics in the DFU population and examine patterns of hyperbaric oxygen therapy (HBOT), negative pressure wound therapy (NPWT), and becaplermin gel utilization. **METHODS:** Retrospective, de-identified electronic medical records from 2007-2013 were extracted from the Intellicure Limited Data Set (I-LDS). The I-LDS extracts records from 96 hospital-based outpatient wound centers. Patient, wound and encounter level characteristics were examined. Utilization of advanced therapies including HBOT, NPWT, and becaplermin gel were analyzed. **RESULTS:** A total of 10,359 patients, 21,677 wounds, and 222,861 encounters for DFU were identified. The majority of patients was male (60.9%), Caucasian (63.5%), and reported Medicare as their primary insurance (51.1%). The average age was 63.9 (SD=13.5) and the average number of evaluation and management visits was 21.9 (SD=26.9). Mean wound surface area was 5.6 cm² (SD=27.3). Of the 10,359 patients, approximately 28.2% received HBOT, 16.0% received NPWT, and 4.1% received becaplermin gel. Average number of HBOT visits was 31.7 (SD=24.9) and 1.2 (SD=0.6) episodes for NPWT. The average number of becaplermin days was 81.7 (SD=113.2). Of the 21,677 wounds, the overall average wound treatment time was 3.4 months (SD=8.4). The reported risk of amputation was lower in wounds treated with becaplermin (3.3%) compared to the overall population (5.3%), problems treated with NPWT (5.6%) and HBOT (9.8%), respectively. Wounds treated with becaplermin were more likely to heal (46.3%) relative to the overall population (41.1%), problems treated with NPWT (27.5%) and HBOT (32.2%), respectively. **CONCLUSIONS:** Advanced therapy utilization varied within outpatient wound centers. Results from this analysis indicate that health care providers are using advanced therapies on difficult-to-heal DFUs.

PMD12

EXAMINATION OF INTERVAL INCIDENCE OF COLORECTAL CANCER (CRC) AT SUBSEQUENT COLONOSCOPY OVER TIME: POPULATION-BASED RETROSPECTIVE COHORT STUDY

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OBJECTIVES: Evidence for surveillance intervals of colonoscopy are primarily based on adenoma recurrence rather than on CRC incidence. Current evidence suggests that due to the overuse of surveillance colonoscopy among low-risk patients and the underuse among high-risk patients the recommended surveillance intervals may need adjustment. This study aims to tailor surveillance intervals by estimating incidence of CRC at subsequent colonoscopy under diverse circumstances. **METHODS:** A population-based, retrospective cohort study of patients with a colonoscopy between January 2010 and March 2014 were identified in a well-administrated database of colonoscopy screening and surveillance. The data includes patient demographics, family history of CRC, and the pathology result (including date) of previous and current colonoscopies. Adjusted Weibull regression models estimated the incidence rate of CRC at subsequent colonoscopy given any proper interval and risk (level and coexisting). Levels of risk for patients without CRC, based on baseline colonoscopy, were: High Risk (≥3, large or advanced adenoma), Medium risk and Low risk (no polyp). Coexisting risk was defined by a combination of two the three levels: A) an incomplete polyp removal, B) a ≥3 adenoma at last colonoscopy, C) a personal history of CRC. **RESULTS:** Among total 27,325 patients, the prevalence of CRC at baseline colonoscopy was 8.2% for the patients with follow-up. The benchmark risk was determined by the overall interval incidence of CRC (0.33%) for low risk patients. Men and women with high risk or CRC history exceeded this benchmark in approximately 5 and 10